# Innovating to Secure America's Energy Future

## 2023 NATIONAL TECHNICAL CONFERENCE AND EXHIBITION

4-5 April 2023 Bush Convention Center | Midland, Texas

### DAY 1 – April 4, 2023

8:15 - 8:30	Opening Remarks – Conference Chairs: Mitchell   KEYNOTE – Lori Blong (Octane Energy) "TITLE OF TALK"   BREAK - Exhibits Open		
8:30 - 9:30			
9:30 - 10:00			
	Hall E	Hall A	Ballrooms B-C
10:00 – noon	Bits and Cutters	Cementing & Zonal Isolation	Permian & Delaware Basins
10:00 - 10:30	Overcoming Shock Loads to Improve Drilling Efficiencies: Case studies of bit and cutter designs that drilled Chert Interbedded Lithologies and Dense Conglomerates - Prabhakaran Centala (NOV). #041	"Super Thixo" Cement Cures Karst Losses in Permian Surface Holes - Brandon M Foote (Shell Exploration and Production Company); Cecil B Bernhard (Shell International Exploration and Production); Jeffrey Mankowski (Shell Exploration and Production Company); Graham Wacko (Shell Exploration and Production Company); James Heathman (Consultant). #017	Optimization of Spacer Train for use on Wolfcamp D Production Strings in the Midland Basin - Jason Alex Winegarden (NexTier Completion Solutions); Neal J Johnson (NexTier Completion Solutions); Aida M Conkey (NexTier Completion Solutions); James P Conkey (NexTier Completion Solutions); Otman A Algadi (NexTier Completion Solutions). #004
10:30 – 11:00	Improving PDC Bit Design: A Case Study for 17.5 mm PDC Cutters - Casey S Kitagawa (Taurex Drill Bits); Cameron Devers (Taurex Drill Bits); Josh Criswell (Taurex Drill Bits). #068	Self-Healing Agent Enhanced by Calcium Ions in Cement Slurry to Achieve Self-healing Cement in Offshore Adjustment Wells with High Water Cut - Lin Zhao (China University of Petroleum (Beijing)   SINOPEC Henan Oilfield Branch Company); Haijuan Wang (SINOPEC Henan Oilfield Branch Company); Junhu Yang (SINOPEC Henan Oilfield Branch Company); Lihui Zheng (China University of Petroleum (Beijing)); Chunyu Wang (Nanjing Tech University). #028	Novel Cement Composition Eliminates Water Flow on Intermediate Strings in Midland and Delaware Basins - Lynelle Martinez (Nine Energy Service); Russel Roberts (Nine Energy Service); Casey Bristow (Riteks, Inc.); Fred Sabins (Riteks, Inc.); Larry Watters (Riteks, Inc.). # 038

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11:00 – 11:30	PDC Corrosion Resistant Cutter Testing and Validation in the Permian - Greg M Andreasen (Schlumberger); Chad Conry (Schlumberger); Wiley Long (Schlumberger); Ron Eyre (Schlumberger); .#070	Assessment of CO2 Leak Rate through Cement Fractures Sealed by Nanosilica Gels - olatunji mayowa olayiwola (University of Louisiana at Lafayette). #036	Managed Pressure Drilling in the Delaware Basin - Brandon Foster (TD Unlimited); Carlos M Menendez (Percussion Petroleum). #040
11:30 - 12:00	Extending Performance In The Jonah Field Through Collaboration and Continuous Improvement - Andrew J. Pauli (Baker Hughes); Jacob Benson (Baker Hughes); David G Browning (Baker Hughes); MaeBeth Tappin (Jonah Energy LLC); Greg Gromadzki (Jonah Energy LLC); Peter Blomquist(Diversified Well Logging USA); Lars Oy(Well ID);Ryan Morgan(K&M Technology Group). #072	Improved Primary Cement Job Design Methodology for Mitigation of Vent Gas Flow - Jeremy Downs (Sanjel Energy Services); David Kulakofsky (Impact Fluid Solutions). #062	The Road to a Cement Alternative for Plug & Abandonment of Low Temperature Wells in West Texas Carl Harman (Satanta Oil); Michael McDonald (PQ Corporation); Paul Short (PQ Corporation). #054
12:00 - 1:15	LUNCH & Speaker: Eric van Oort (EVO Energy Consulting) "Geothermal"		

\* #000 refers to the paper number. The full paper number is AADE-23-NTCE-XXX where XXX refers to the #000.

#### Day 1 - Afternoon

1:30 - 3:00	Automation & Al	Geothermal Applications	Student Contest
1:30 - 2:00	MPD Land Rig Integration and Automated Control System Operated by Drillers - Julius Sosa (Frontier International); Ian Knight (Frontier International); Stacy Goetz (Frontier International); Chris Humphries (Frontier International). #006	High-temperature low end rheology modifier proves effective in 15% NaCl water-based drilling fluid - Janine Shipman (CNPC-USA); Meng Lu (CNPC-USA); Fuchen Liu (CNPC-USA); Brett Cramer (BYK USA Inc.); Richard Bennett (BYK USA Inc.); Neil Grant (BYK Additives Ltd); . #005	
2:00 - 2:30	Shale Shaker AI Cuttings Load Classification To Assess Hole Cleaning And Wellbore Stability - Calvin S Holt (DrillDocs). #010	Simulation Study on Controlling Mud Coolers to Mitigate Fluid Loss in Drilling Geothermal Wells - Tan C Nguyen (New Mexico Tech). #031	
2:30 - 3:00	A BRIDGE TOO FAR? Bridging the gap between Remote Operations and True Automation - David E. Lee (Petroleum Co-Ordinators, Inc.   Petroleum Co_Ordinators, Inc.); Justin Christofferson	A Summary of Lessons Learned from Global Geothermal Applications to be Applied in North American Operations - Vance Smith (Newpark Fluids Systems); Lucio Bussaglia (Newpark Fluids	

	(Petroleum Co-Ordinators, Inc.   Petroleum Co_Ordinators, Inc.). #022	Systems); Alessandro Cascone (Newpark Fluids Systems); Carl Thaemlitz (Newpark Fluids	
		Systems). #039	
3:00 – 3:30	BREAK Exhibits Open		
3:30 – 5:00	Case Histories	Fracturing	Student Contest
3:30 – 4:00	Improved Sustainability through Treatment of High Rheology due to Excessive Low Gravity Solids: A Case Study and Field Trial - Kerry Moore (Ingevity); James Klein (Ingevity); Alexandria Hernandez (Ingevity); Shadaab Maghrabi (Ingevity); Nathen Sellers (Paragon ISG); Jason Bush(Paragon ISG); Chris Pennington(Paragon ISG). #009	A Coupled Geomechanics-Reservoir Simulation Workflow to Estimate the Optimal Well-Spacing in the Wolfcamp Formation in Lea County - Dung T Bui (New Mexico Institute of Mining and Technology); Tan C Nguyen (New Mexico Institute of Mining and Technology); Hyunsang Yoo (New Mexico Institute of Mining and Technology). #014	
4:00 – 4:30	A Novel and Sustainable Non-Aqueous Insulating Packer Fluid - Shermin Akhtar (Schlumberger); Balakrishnan Panamarathupalayam (Schlumberger). #018	Refracturing Activities in the United States — How Much Do We Know So Far? - Husam H. Alkinani (Missouri University of Science and Technology); Abo Taleb T. Al-Hameedi (Missouri University of Science and Technology). #026	
4:30 – 5:00	Tailored for Success: Reservoir Drill-In and Breaker Fluids Customization to Achieve Optimized Well Productivity– A Case Study - Brittany Granger (Newpark Resources); Joshua Harton (Newpark Resources); Christopher Detiveaux Sr. (Newpark Resources); . #034	Identifying Lost-Circulation Zones from Shear Wave Slowness in Volve Field-North Sea using Machine Learning - Sherif M. Elkholy (Oklahoma State University); Hunjoo P. Lee (Oklahoma State University). #047	

	DAY 2 – April 5, 2023 PANEL – Exciting New Technologies			
8:00 - 9:30				
9:30 – 10:00	BREAK Exhibits Open			
10:00 - 12:00	Fluid Losses & Lost Circulation	Digital Technologies	STUDENT – INDUSTRY & HR INTERACTIVE	
10:00 – 10:30	Laboratory Study of Environmentally Friendly Drilling Fluid Additives to Regulate Alkalinity and Control Fluid Loss in Water-Based Muds - Abo Taleb Al-Hameedi (Missouri University of Science and Technology); Husam Alkinani (Missouri University of Science and Technology). #019	Remote Frac Operations With Digital Solutions: A Permian Basin Case Study - Hunter Hart (Occidental Petroleum Corporation); Andrew Haines (Occidental Petroleum Corporation). #015		
10:30 - 11:00	A Novel Chemistry for Fluid Loss in Oil Based Drilling Fluids - Alicia B Richards (AquaSol Corporation); Ryan M Arioli (AquaSol Corporation). #043	Use case of Digital Technology creating value in today's Oil & Gas industry Gabriel Azzarelli (Newpark Fluids Systems); Ahmed Amer (Newpark Fluids Systems); Travis Vordick (Newpark Fluids Systems); Charles (Bill) Alsobrook (Newpark Fluids Systems); Fahad Zia (Newpark Fluids Systems). #044		
11:00 – 11:30	Mixed Metal Oxide Fluid's Applicability to Naturally Fractured Zones including Reservoirs Arthur H Hale (Aramco Americas); Ahmed Amer (Newpark Drilling FLuid); Pawilai Hallmark (Newpark Drilling FLuid). #048	Digital Rock Lab Enables Application-Specific Three- Dimensional Cutter Development and Its Application in Haynesville Shale Lateral Drilling - Xiaoge Gan (Schlumberger); Curtis Byrd (Schlumberger); Yuri Burhan (Schlumberger); Wiley Long (Schlumberger); John Zhang (Schlumberger). #065		
11:30 - 12:00	Acid Soluble, Expandable Loss Circulation Material - Ashok Santra (Aramco Americas); Arthur Hale (Aramco Americas). #049	Introduction to API RP-78 Wellbore Positioning - Jonathan Dale Lightfoot (Oxy); Ben Coco (American Petroleum Institute); Willard Tank (Oxy). #073		
12:00 – 1:15	LUNCHEON and Awards Presentations Peter Hennings (TexNet) "Seismic in the Permia	an"	'	

#### DAY 2 –

1:30 - 3:00	Fluids	Drillpipe & Tubulars	Sag & Fluid Optimization
1:30 - 2:00	Evaluation of Laboratory Performance Tests for Drilling Fluids - Dimitri M Khramov (Schlumberger Technology Corp); Evgeny Barmatov (Schlumberger Cambridge Research); Balakrishnan Panamarathupalayam (Schlumberger Technology Corp). #012	Spiralbanding Significantly Increases Drill Pipe Service Life in West Texas Michael Huber (Postle Industries). #025	New Technology of the Past: Optimizing Water- Based Drilling Fluid to Match Unconventional Drilling Challenges - Richard Joseph Toomes (AES Drilling Fluids); Matthew Offenbacher (AES Drilling Fluids). #071
2:00 - 2:30	Low Viscosity Direct Emulsion Fluid Stabilized by Surfactant Only - Jeremy Smith (M-I SWACO, Schlumberger); Lynn M Foster (M-I SWACO, Schlumberger); Dimitri Khramov (M-I SWACO, Schlumberger). #023	Reducing Pipe Wear in Water-Based Mud Systems: Applying Tribological Properties with a Novel Surfactant-Based Lubricant - Zachary E Turi (Drillchem Drilling Solutions); Brandon Hayes (Drillchem Drilling Solutions) .#029	A New Developed High Performance WBM for Enhancing ROP and Minimizing both ECD and Barite Sagging in Drilling Shally Wolfcamp Formations - Mohamed Metwally (PhD candidate of Petroleum Engineering / New Mexico Tech); Tan Nguyen (New Mexico Tech); Mitchell Gipson (Reliance Energy). #030
2:30 - 3:00	Nanotechnology Based Shale Inhibitors - Ashok Santra (Aramco Americas); Arthur Hale (Aramco Americas); hasmukh patel (Aramco Americas). #050	Latch Type Surface Casing Mandrel (SCM) Safely Simplifies Casing Head installation - Tyler Blankemeyer (Downing); Tim Marvel (SEF Energy). #058	Innovative Lab Equipment Design For Evaluating Weight-material Sag Under Downhole Temperature And Pressures To Optimize Drilling Fluid Formulations - Juan Pablo Jaimes (Schlumberger); Seth Croy (Schlumberger). #016
3:00 – 3:30	BREAK – Best Exhibitor Award Exhibits Open		

#### Day 2 – Late Afternoon

3:30 - 5:30	Supply Chain	Tools	
3:30 - 4:00	Supply Chain Chaos: Securing Barite in the Aftermath of the Pandemic - Matthew Offenbacher (AES Drilling Fluids); Tom Eisenman (Superior Weighting Products); Lonnie Broussard (AES Drilling Fluids). #024	Materials and Connections for BHA Components - Robert William McCullough (NTS Amega Global). #033	
4:00 – 4:30	Achieving Unconventional Well Construction Objectives with an Innovative & Sustainable Water-based Fluid - Pawilai Hallmark (Newpark Fluids Systems); Vance Smith (Newpark Fluids Systems); Nathan Tarver (Newpark Fluids Systems); KJ Terrell (Newpark Fluids Systems). #035	A Comparative Study of Float Valves with CFD Modeling - David Barker (Drilling Tools International); Nikolos Manesh (Drilling Tools International); Marc Haci (Drilling Tools International); David Cotten (Drilling Tools International). #042	
4:30 - 5:00	Improving Supply Chain Efficiencies in a Supply Crunch with Cross-Functional Collaboration - Tushar Chawla (Newpark Fluids Systems); Kassie Harris (Newpark Fluids Systems); Diogo Wink Tourinho (Newpark Fluids Systems); Flavio Costa Vieira (Newpark Fluids Systems). #046	Advancing Casing Drilling to Deepwater: An Efficient Means to Improve Top Hole Well Construction - Steven Michael Rosenberg (Subsea Drive Corporation). #057	

#### **ALTERNATES**

A Systematic Approach for Wellbore Instability Using Core Samples and Wireline Measurement for Limestone: A Case Study from the Ratawi Field, Iraq - Abo Taleb Al-Hameedi (Missouri University of Science and Technology); Husam Alkinani (Missouri University of Science and Technology). #020

**Use of Innovative Second-Generation Flat Rheology Fluid Ensures Successful Delivery of Narrow Margin, Directional Wells** - Tulio Olivares (Saudi Aramco); Rafael Pino (Saudi Aramco); Alessandro Cascone (Newpark Drilling Fluids) #021

Kerogen Accretion in Non-aqueous Drilling Fluids - Shawn S Lu (Premier Oilfield Group). #027

How a PDC Shaped Cutter Forms the Cuttings to Improve the Cutting Efficiency - Kian Sheikrezaei (NOV - ReedHycalog); Prabhakaran Centala (NOV - ReedHycalog). #045

US Operational results that new Gilsonite Uintaite / Polymeric Aqueous Product Possess Chemical Characteristics as a Hole Stabilization and Clay Control Additive - Dario Montes (American Gilsonite); Katy Aguilar (American Gilsonite); Corey Webb (American Gilsonite); Jason Nelson (Basin Fluids); Max Otero (Basin Fluids). #059

**How Does Flow Rate Affect Drillstring Vibrations? Experimental Investigation** - Eshan K Maitra (Oklahoma State University); Mohammed F Al Dushaishi (Oklahoma State University). #061

**Non-Newtonian Clogged Flows in Bifurcated Pipelines and Conduits** - Jamie A Chin (Stratamagnetic Software, LLC). #063

How Using a Fluid Caliper Makes Spudder Rig Programs More Cost Effective and Efficient - Jason Ellison (Ellison Fluid Calipers). #066